

ABSTRACT OF THE DISCLOSURE

A switched reluctance drive, operating either as a motor or a generator, is controlled in a stable manner in the continuous current mode in the presence of supply voltage or electrical load variation. The use of a current control parameter  $I_x$  in addition to the conventional on- and off-angles  $\theta_{on}$ ,  $\theta_{off}$  gives the ability to operate smoothly in the continuous current mode and to transition smoothly between operating modes. Once the phase current reaches a pre-determined level  $I_x$ , the phase winding may be placed in a freewheel state, thereby controlling the standing current in the phase winding and/or the output voltage.